Remarks

Claims 1-4 are pending.
Claims 1-4 are rejected.
Claims 5-10 are cancelled.

Claim 1 is amended to incorporate the subject matter of Claim 5, and to claim that at least two adjustments are made in the operation of the claim, where the quantization levels used to quantize transformed video information after a transform operation (such as a DCT operation, see paragraph 42 of the specification). The other operation is a bit rate shaping operation (see paragraph 43 of the specification) which is performed on quantized information.

No new matter was added in view of these amendments.

I. 35 U.S.C. 103(a) Rejection of Claims 1-4

The Examiner rejected Claims 1-4 under 35 U.S.C. 103(a) as being unpatentable over Key et al. (U.S. Patent Publication No. 2004/0148423, hereafter referred to as 'Key') in further view of Klinker et al. (U.S. Patent Publication No. 2007/0140128, hereafter referred to as 'Klinker'). Applicants disagree with this ground of rejection.

Specifically, Claim 1, as amended claims that a neural network is used for performing a step of adjustment of a video encoder. These adjustments include "comprise the operations of modifying a quantization level used to quantize said video information after a transform operation and bit rate shaping by adjusting the bit rate used for encoding said quantized video information". The adjustment of both of these aspects of a video encoder, including the bit rate used for encoding quantized video information, are neither disclosed or suggested in the Examiner's combination of Key and Klinker.

The closest the combination comes to anticipating the combination of both features is disclosed in paragraph 0049 of Key which states "in one embodiment, the codec may directly alter quantization levels to adjust quality and thereby alter transmission rate." This disclosure of Key with Klinker, however do not discuss

anything else about how to perform such an adjustment. Moreover, paragraph 49 does not address the issues surrounding bit rates (unlike Claim 1).

Regardless, Applicants assert that the disclosed solution of Key with Klinker focuses on the transmission rate of information that is outputted by the combined system. That is, when network congestion occurs, the Examiner's combined system would suggest some way of modifying the <u>output transmission rate</u> of the transmission system, which would lower the total amount of data being transmitted/outputted over a network ("based on this feedback (e.g., a congestion report), the transmitting end system 101 alters its transmission rate (up or down) in an effort to better optimize the bandwidth usage at the router 116," Key, paragraph 46).

The Applicants' invention operates differently where the system will adjust both the quantization level used and the bit rate used in view of network conditions by use of a neural network. The concern inherently to the development of the Applicants' system is a different approach than used by the combination of Key and Klinker. That is, by controlling the encoding of video information (in the way as claimed), the transmission rate of data being outputted may stay constant. The result of the Applicants' claimed system provides more flexibility and is better suited for the delivery of video information (by adjusting two factors) without having to reduce the overall amount of data being transmitted (as suggested by the Examiner's combination.

A second difference between the Applicants' invention of Claim 1 and the Examiner's combination is in the use of a neural network. Specifically, the Examiner cites to that the neural network of the passive flow analyzer of Klinker when combined with Key would anticipate the claimed features of Claim 1. Applicants disagree with this conclusion in that the disclosure of Klinker for a neural network is for the operation of a UDP network as to identify possible service level violations of such a network (see paragraph 102 of Klinker). Hence, a neural network of Klinker as combined with Key would suggest a system that using a neural network for reporting network errors, which is different than using a neural network for controlling a video encoding operation, as in Claim 1. Moreover, the use of using a neural network to adjust both a quantization level and the bit rate of an encoder is neither disclosed nor suggested in Key or Klinker, alone or in combination. At best, the combination of Klinker with Key suggests the

use of a neural network for determining the behavior of a network (not how to encode video information for such a network by using a neural network, as in Claim 1, in a specific way).

In regards to Claim 2, Applicants assert that the Examiner's combination of Key with Klinker does not disclose or suggest the specific use of the four factors used in the claim. That is, the Examiner has to establish why the prior art would use all of the selected four factors (as claimed), instead of other network reported factors.

For the reasons given above, the Applicants assert that Claims 1-4 are patentable. Applicants request that the Examiner remove the rejection to these claims. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the Applicant's attorney at (609) 734-6809, so that a mutually convenient date and time for a telephonic interview may be scheduled.

Applicants request a three month extension to submit this response under 37 C.F.R. 1.136(a). The fee for this extension has been paid with this response by using the EFS-Web system. Please charge any additional fees owed in connection with this response to Deposit Account 07-0832.

Respectfully submitted,

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